

September 11, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19I0210

Re: Daily

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 14 sample(s) on 9/5/2019 11:15:00AM for the analyses presented in the following report as Work Order 19I0210.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager



WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Daily
Lab Order: 19I0210

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0210-01	011-Composite	011	09/04/2019 06:10	9/5/2019 11:15:00AM
19I0210-02	011-Grab	011	09/04/2019 06:10	9/5/2019 11:15:00AM
19I0210-03	001-Composite	001	09/04/2019 06:25	9/5/2019 11:15:00AM
19I0210-04	001-Grab	001	09/04/2019 06:25	9/5/2019 11:15:00AM
19I0210-05	Mixed Liquor-Grab	Mixed Liquor	09/05/2019 06:50	9/5/2019 11:15:00AM
19I0210-06	J-Box-Grab	J-Box	09/05/2019 06:40	9/5/2019 11:15:00AM
19I0210-07	RSB FT Overflow-Grab	RSB FT Overflow	09/05/2019 07:50	9/5/2019 11:15:00AM
19I0210-08	999-Grab	999	09/05/2019 08:27	9/5/2019 11:15:00AM
19I0210-09	002-Grab	002	09/04/2019 08:10	9/5/2019 11:15:00AM
19I0210-10	CM1-Grab	CM1	09/05/2019 00:00	9/5/2019 11:15:00AM
19I0210-11	CM2-Grab	CM2	09/05/2019 00:00	9/5/2019 11:15:00AM
19I0210-12	CM6 Grab	CM6	09/05/2019 00:00	9/5/2019 11:15:00AM
19I0210-13	HM2-Grab	HM2	09/05/2019 00:00	9/5/2019 11:15:00AM
19I0210-14	HM3-Grab	HM3	09/05/2019 00:00	9/5/2019 11:15:00AM

Field Results

Client:	Arcelor Mittal USA, Inc.	Work Order:	1910210
Client Project:	Daily		
Client Sample ID:	011-Grab	Work Order/ID:	1910210-02
Sample Description:	011	Sampled:	09/04/2019 06:10
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID:	001-Grab	Work Order/ID:	1910210-04
Sample Description:	001	Sampled:	09/04/2019 06:25
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID:	J-Box-Grab	Work Order/ID:	1910210-06
Sample Description:	J-Box	Sampled:	09/05/2019 06:40
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
pH	8.6	pH Units

Client Sample ID:	RSB FT Overflow-Grab	Work Order/ID:	1910210-07
Sample Description:	RSB FT Overflow	Sampled:	09/05/2019 07:50
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
pH	8.9	pH Units

Client Sample ID:	999-Grab	Work Order/ID:	1910210-08
Sample Description:	999	Sampled:	09/05/2019 08:27
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
pH	7.9	pH Units

Client Sample ID:	002-Grab	Work Order/ID:	1910210-09
Sample Description:	002	Sampled:	09/04/2019 08:10
Matrix:	Aqueous	Received:	09/05/2019 11:15

Analyses	Result	Units
pH	8.1	pH Units



CASE NARRATIVE

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.

Project: Daily

Lab Order: 19I0210

Report has been revised at the clients request to include Cu and Ag for Outfall 001. 9/11/19

Microbac Laboratories, Inc.

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-01
Client Project:	Daily	Sampled:	09/04/2019 6:10
Client Sample ID:	011-Composite	Received:	09/05/2019 11:15
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 200.7 Rev 4.4									
Analyst: RPL									
Prep Date/Time: 09/05/2019 11:56									
Total Recoverable Metals by ICP									
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	09/05/2019 14:28
Zinc	ejj	A	0.012	0.0073	0.020		mg/L	1	09/05/2019 14:28
Method: SM 4500-CN C/E-1999									
Analyst: ABG									
Prep Date/Time: 09/05/2019 12:09									
Total Cyanide									
Cyanide, Total	ejj	A	0.0042	0.0020	0.0050		mg/L	1	09/05/2019 14:50
Method: SW-846 9014									
Analyst: ABG									
Prep Date/Time: 09/05/2019 11:55									
Free Cyanide									
Free Cyanide		A	ND		0.0062		mg/L	1	09/05/2019 14:43
Method: EPA 350.1 Rev 2.0									
Analyst: EF									
Prep Date/Time: 09/05/2019 14:10									
Nitrogen, Ammonia as N									
Nitrogen, Ammonia (As N)	ei	A	0.27	0.054	0.10		mg/L	1	09/05/2019 16:39
Method: EPA 420.4 Rev 1.0									
Analyst: ABG									
Prep Date/Time: 09/05/2019 12:00									
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/05/2019 15:09
Method: SM 2540 D-1997									
Analyst: KMT									
Prep Date/Time: 09/05/2019 11:26									
Total Suspended Solids									
Total Suspended Solids	ejj	A	1.9	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-02
Client Project:	Daily	Sampled:	09/04/2019 6:10
Client Sample ID:	011-Grab	Received:	09/05/2019 11:15
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: KMT			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 09/05/2019 07:37										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/05/2019 14:37	

Analytical Results

Date: Wednesday, September 11, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: 001-Composite
Sample Description: 001
Matrix: Aqueous
Work Order/ID: 19I0210-03
Sampled: 09/04/2019 6:25
Received: 09/05/2019 11:15

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP			Prep Date/Time: 09/05/2019 11:56						
Copper	ejj	A	0.0024	0.0013	0.010		mg/L	1	09/05/2019 14:33
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	09/05/2019 14:33
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	09/05/2019 14:33
			Method: EPA 200.8 Rev 5.4			Analyst: BTM			
Total Recoverable Metals by ICP/MS			Prep Date/Time: 09/08/2019 12:49						
Silver	ejj	A	ND	0.000053	0.00060	U	mg/L	1	09/09/2019 13:48
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide			Prep Date/Time: 09/05/2019 12:09						
Cyanide, Total	ejj	A	0.0030	0.0020	0.0050		mg/L	1	09/05/2019 14:52
			Method: SW-846 9014			Analyst: ABG			
Free Cyanide			Prep Date/Time: 09/05/2019 11:55						
Free Cyanide		A	ND		0.0062		mg/L	1	09/05/2019 14:48
			Method: EPA 350.1 Rev 2.0			Analyst: EF			
Nitrogen, Ammonia as N			Prep Date/Time: 09/05/2019 14:10						
Nitrogen, Ammonia (As N)	ei	A	0.32	0.054	0.10		mg/L	1	09/05/2019 16:46
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
Total Phenolics			Prep Date/Time: 09/05/2019 12:00						
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/05/2019 15:11
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids			Prep Date/Time: 09/05/2019 11:26						
Total Suspended Solids	ejj	A	1.3	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-04
Client Project:	Daily	Sampled:	09/04/2019 6:25
Client Sample ID:	001-Grab	Received:	09/05/2019 11:15
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 1664B					Analyst: KMT				
Oil & Grease (HEM) by SPE									
Prep Date/Time: 09/05/2019 07:37									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/05/2019 14:37

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-05
Client Project:	Daily	Sampled:	09/05/2019 6:50
Client Sample ID:	Mixed Liquor-Grab	Received:	09/05/2019 11:15
Sample Description:	Mixed Liquor		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 F-1997				Analyst: DAT		
			Prep Date/Time: 09/05/2019 11:45						
Settleable Solids									
Settleable Solids	i	A	200	1.0	1.0		ml/L	1	09/05/2019 11:45
			Method: SM 2540 D-1997				Analyst: KMT		
			Prep Date/Time: 09/05/2019 11:26						
Total Suspended Solids									
Total Suspended Solids	ejj	A	1900	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-06
Client Project:	Daily	Sampled:	09/05/2019 6:40
Client Sample ID:	J-Box-Grab	Received:	09/05/2019 11:15
Sample Description:	J-Box		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 09/05/2019 11:26									
Total Suspended Solids	ejj	A	12	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-10
Client Project:	Daily	Sampled:	09/05/2019 0:00
Client Sample ID:	CM1-Grab	Received:	09/05/2019 11:15
Sample Description:	CM1		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 09/05/2019 11:26									
Total Suspended Solids	ejj	A	13	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-11
Client Project:	Daily	Sampled:	09/05/2019 0:00
Client Sample ID:	CM2-Grab	Received:	09/05/2019 11:15
Sample Description:	CM2		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
			Prep Date/Time: 09/05/2019 11:26						
Total Suspended Solids									
Total Suspended Solids	ejj	A	14	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-12
Client Project:	Daily	Sampled:	09/05/2019 0:00
Client Sample ID:	CM6 Grab	Received:	09/05/2019 11:15
Sample Description:	CM6		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
			Prep Date/Time: 09/05/2019 11:26						
Total Suspended Solids									
Total Suspended Solids	ejj	A	10	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-13
Client Project:	Daily	Sampled:	09/05/2019 0:00
Client Sample ID:	HM2-Grab	Received:	09/05/2019 11:15
Sample Description:	HM2		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 09/05/2019 11:26									
Total Suspended Solids	ejj	A	11	1.0	1.0		mg/L	1	09/05/2019 13:35

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0210-14
Client Project:	Daily	Sampled:	09/05/2019 0:00
Client Sample ID:	HM3-Grab	Received:	09/05/2019 11:15
Sample Description:	HM3		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 09/05/2019 11:26									
Total Suspended Solids	ejj	A	12	1.0	1.0		mg/L	1	09/05/2019 13:35

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 4.2°C
 MICROBAC®

Comments

Metals sample preserved at lab

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

Microbac Laboratories, Inc.

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com



Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Thursday

Lab Work No: 19I0210

* Date Obtained: 9-5-19
** Sample Date: 9-5-19

Location	Time	Sampler	Type	Preserved	Cooled	Containers			Parameters	Comments
						Type	Qty	Vol. (ml)		
011 **	06:10	[Signature]	Comp	No	Yes	Glass	1	4000	pH	01
			Grab	No	No	Plastic	1	500		02
001 **	06:25	[Signature]	Comp	No	Yes	Glass	1	4000	pH	03
			Grab	No	No	Plastic	1	125		04
Mixed Liquor *	06:50	[Signature]	Grab	No	No	Plastic	1	2000	TSS, Settling	05
DIW-131 *	N/A	[Signature]	Grab	No	No	Plastic	1	125	pH	X
J-Box *	06:40	[Signature]	Grab	No	No	Plastic	1	1000	TSS, pH	06
RSB FT Overflow *	07:50	[Signature]	Grab	No	No	Plastic	1	125	pH	07
999 *	08:27	[Signature]	Grab	No	No	Plastic	1	500	pH	08
002 **	08:10	[Signature]	Grab	No	No	Plastic	1	125	pH	09
SWTP *		***	Grab	No	No	Plastic	TS	1000	TSS	10-14

*** WPL is for previous sample date
**** Sample collected by Water Process personnel

No HM (+ CM 3)

$$\begin{array}{r}
 4.5 \\
 - 0.3 \\
 \hline
 4.2 \text{ } \checkmark \text{ } \text{SI}
 \end{array}$$

Relinquished by: [Signature]
 Received by: [Signature]

Date: 9-5-19 Time: 08:05
 Date: 9/5/19 Time: 0805

Env 4x Rev. 8 07/01/16 (TEK)

19I0210 Carey Gadzala
 ArcelorMittal - Burns Harbor, IN
 Daily
 09/05/2019



Microbac Laboratories, Inc. - Chicagoland Division
Residual Chlorine - METHOD SM 4500-Cl I-2000
Arcelor Mittal /Burns Harbor NPDES

Meter ID: BA Meter Residual Chlorine Standard: A9074
 Iodine Reagent: 146367 Acid Reagent: 147996

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L	BAO	9/5/19 0800
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope Blank	0.00		
LCS 0.02 mg/L	0.03		
011	0.00		
011 DUP	0.00		
001	0.00		
002	0.00		
003	0.00		
DUP 003	0.00		

Meter ID: _____ Residual Chlorine Standard: _____
 Iodine Reagent: _____ Acid Reagent: _____

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L		
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope			
LCS 0.02 mg/L			
011			
011 DUP			
001			
002			
003			
DUP			

Meter ID: _____ Residual Chlorine Standard: _____
 Iodine Reagent: _____ Acid Reagent: _____

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L		
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope			
LCS 0.02 mg/L			
011			
011 DUP			
001			
002			
003			
DUP			

